

عنوان مقاله:

Effect of particle size and crystal structure of titanium dioxide nanoparticles on the photocatalytic properties

محل انتشار:

اولین کنفرانس فناوری نانو در محیط زیست (سال: 1385)

تعداد صفحات اصل مقاله: 12

نویسندگان:

Behnajady - Assistant professor Department of Applied Chemistry, Islamic Azad University, Tabriz Branch, Tehran, Iran

Modirshahla - Associate professor Department of Applied Chemistry, Islamic Azad University, Tabriz Branch, Tehran, Iran

Shokri - Lecturer Department of Applied Chemistry, Islamic Azad University, Tabriz Branch, Tehran, Iran

Elham - Master of Science Department of Applied Chemistry, Islamic Azad University, Tabriz Branch, Tehran, Iran

خلاصه مقاله:

Titanium dioxide nanoparticles with different average diameter of particles (8, 18 and 27 nm) and different crystal structure (anatase and rutile) were used for degradation of C.I. Acid Red 88 (AR88) as a model compound. The degree of degradation of AR88 by TiO₂ nanoparticles under irradiation of UV-light (254 nm) decreases with reducing TiO₂ nanoparticles from 27 to 8 nm in anatase crystal structure. TiO₂-P25 anatase and rutile (80:20) showed high photoactivity than other samples TiO₂- UVI 00 (8 nm diameter and 100% anatase) and TiO₂-Merck (27 nm diameter .(and 95% anatase

کلمات کلیدی:

Advanced oxidation processes (AOPs)-Heterogenous Photocatalysis-TiO₂ nanoparticles-Decolorization-C.I. Acid Red
27

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/27384>

